Patent Claims

1. A process for manufacturing foils for coatings, especially ski and snowboard linings and bearing coatings, from high and ultra-high molecular polyethylene, polypropylene and/or poly(vinylidene difluoride) characterized in that powdered polyethylene, polypropylene and/or poly(vinylidene difluoride), optionally with the addition of colours and/or additives, is spread on a sintering belt circulating in a sintering furnace, thermally sintered and compacted by smoothing rollers to form a foil material with a porosity of 0 to 10%, preferably < 1%.

2. A process according to claim 1 in which the foil material is compacted to a porosity of < 0.5% and following the compacting step cooled in a water-bath or by fan cooling for adjusting the crystallinity.

3. A process according to claim 1 or 2 in which the foil web is coated with another foil material, fleece or the like during the compacting step.

4. A process according to anyone of claims 1 to 3 in which poly(tetrafluoroethylene) is added to the polyethylene, polypropylene and/or poly(vinylidene difluoride).

5. A process according to anyone of claims 1 to 4 in which fleeces for thermal diffusion, coatings, screens, felts, glass mattings, tissues of glass fibre and plastics blends, carpet tissue and/or carbon materials are applied to the foil web.

6. A process according to anyone of claims 1 to 5 in which together with the polyethylene, polypropylene and/or

poly(vinylidene difluoride) additives of dyes and pigments like carbon black, graphite and interference pigments, lustrous and luminous substances like glitter, solid lubricants or gliding agents like waxes, graphite, teflon, hexagonal boron nitride, molybdenum sulfide and antimony sulfide, functional additives like bonding agents, plasticizers and wetting agents, and opacity intensifiers like cerium oxide, titanium oxide and zirconium oxide are spread on.

7. A process according to anyone of claims 1 to 6 in which by the smoothing rollers a foil web is produced with a thickness of between 0.1 and 5 mm.

8. A process according to anyone of claims 1 to 7 in which polyethylene with a molecular weight in the range of 450,000 to 8,000,000 is used.

9. A process according to anyone of claims 1 to 8 in which the polyethylene has a particle size in the range of 0.1 to 250µm.

10. A process according to any of claims 1 to 9 in which the sintering temperature is in the range of 50 to 200°C.